ABSTRACT

A rapid assay for single nucleotide polymorphism (SNP) detection that utilizes electronic circuitry on silicon microchips is disclosed. The method provides accurate discrimination of amplified DNA samples following electronic assisted transport, concentration, and attachment of DNA to selected electrodes (test sites). The test sites make up organized arrays of samples that are distinguished by using internal controls of dual labeled reporters comprising wild-type and mismatched sequences to validate the SNP genotype. This method has been used to discriminate the complex quadra-allelic SNP of mannose binding protein.